REMARKS

Claims 1-29 remain in the application. Claim 1 has been amended for clarity.

Claims 7, 8, 20 and 27 are allowed.

With minimal exceptions, the rejections of the final action are essentially unchanged from those of the prior action, and do not address applicant's prior arguments. The responses to arguments are basic denials that do not address the multitudes of arguments made, and the many reasons why the rejections are in error. Thus, the action does not meet MPEP requirements that it address applicant's arguments.

Claims 1-6, 9 and 10 were rejected under §103(a) as unpatentable over Hadwin in view of Bender (as before) and further in view of Belart.

Hadwin discloses an electrical probe with a spring biased pin 26 reciprocating in a spring-loaded sheath 28. An electrical component 34 is connected to the fixed rear end of the sheath (away from the pin end), with the component providing a serial connection between the sheath and a transmission line 18. The electrical component is not part of nor directly connected to the pin, nor part of the sleeve. A non-conductive sleeve 32 mechanically receives and supports the pin-sheath and component.

Bender discloses an electrical probe with a fixed elongated tip 16 that extends well beyond a metal sleeve 15, 15a to which it is fixed. The sleeve extends beyond a housing nose portion 12, which is said to optionally include electrical components connected to the tip, and to a pin extending to circuitry. There is no indication that the tip or any optional components reciprocate with respect to the sleeve.

Belart discloses a probe having fixed pin 16 that does not reciprocate, an internal resistor cartridge 22 contacts the pin but is not included as part of the pin. A coil spring 36 provides a compliant contact in the manner of a flashlight battery contact, but there is no suggestion that the resistor cartridge reciprocates as asserted in the action. A sleeve 20 moves with respect to the fixed pin and fixed resistor, to selectably bypass the resistor by shorting the pin to a rearward contact.

The §103 rejection of claim 1 is in error for several reasons: none of the references disclose certain claimed features; even if combined, the references would not lead to the claimed invention; the rejection lacks adequate motivation to make the proposed combination; and the proposed combination appears to based only in hindsight.

The first error in the rejection of claim is in the action's incorrect assertion that Belart discloses a probe with a component that reciprocates with respect to a sleeve. In Belart, the tip is fixed, and does not reciprocate. The resistor cartridge is fixed, and does not reciprocate. Moreover, and as clarified by the amendment to claim 1, the claimed sleeve is not merely any sleeve that moves, regardless of function. The claimed sleeve is defined in the sense of ordinary spring pins, with the sleeve connected to a signal, and the pin remaining connected to the pin during its reciprocation. However, even without the clarifying amendments, the pin and component of Belart do not reciprocate.

The second error in the rejection of claim 1 is in that none of the references disclose a pin that is axially movable within the sleeve, and an electrical component reciprocating with respect to the sleeve. Hadwin shows a movable pin and a fixed portion with an attached fixed electrical component. Bender and Belart disclose fixed pins with components attached to fixed elements. The consensus of the cited references is that probe electrical components are always fixed, even when the probe has a reciprocating component. Thus, there is no reference or combination that teaches a component that reciprocates.

The third error in the rejection of claim 1 is in the action's incorrect assertion that a combination of the references would lead to the claimed invention. Even if the cited references were combined, they would not lead to the claimed invention. If one were to seek to modify Hadwin based on the teachings of Bender and Belart, one might adopt any number of their features. Even if one adopted the feature of including an electrical component in a probe with a movable portion, and a fixed portion, the references teach attachment of a component only to a fixed portion of a probe. A combination flowing from the references (and not from hindsight) would at most add a component to a fixed part of the Hadwin probe.

The fourth error in the rejection of claim 1 is that the action fails to articulate adequate motivation for the proposed combination. The prior action's motivation to combine Bender and Hadwin has been dropped without replacement. No motivation is provided to modify Hadwin

based on Bender. In addition, the only motivation to combine the features of Belart is "for impedance," which is not supported by the references. There is no indication that the Hadwin device has any lack of impedance, nor that Belart's resistor cartridge would provide needed impedance. The asserted motivation appears unconnected to the art.

Claims 2-10 depend from claim 1 and should be allowable for the above reasons and because of the features set forth therein.

Claim 9 should be allowable for the additional reasons that the art of record does not disclose the claim limitation that the pin portion forward of the component has a limited aspect ratio of less than double its diameter, and because there is no articulated motivation to adopt the radically different proportions claimed. This is not a mere matter of dimensional or design choice, but a significant departure from the lengthy pin portions of the cited references. Hadwin's movable pin is at least about 7-10 times as long as its diameter, and the entire conductive portion forward of the component is more than 10 times the diameter. Bender's exposed tip portion is at least about 5 times as long as its diameter, and any practical location of the component would appear to be at least about 20-60 times the pin diameter to the rear. The action does not state where either reference suggests an advantage or motivation to move the component closer to the tip, and to have a short tip portion forward of the component. Accordingly, the "optimum or workable range" suggested by the cited art is a tip length in the range of 10-60 times the diameter. Thus the claimed range of less than 2 is well outside normal ranges. For this additional reason, claim 9 should be allowable.

Claim 10 should similarly be allowable because the claimed dimensions appear to be well outside of the normal range as evidenced by the cited references. In addition, a major modification to provide the ratio of claim 9 or the length of claim 10 would require major design and structural changes beyond the capabilities of one with only routine skill in the art, and thus the references teach away from such a modification.

Claims 13, 15, 16 and 18 were rejected under §103(a) as unpatentable over Calma in view of Bender. The rejection is in error because the asserted motivation (the same as claim 1) is inadequate for the reasons discussed above with respect to claim 1. Claim 15 should be allowable for the additional reasons discussed above with respect to claim 5, in that the Bender

teaching is to position a component rearward of the entire tip, and not between front and rear portions. Claim 18 should be allowable for the reasons discussed above with respect to claim 9.

Claim 19 was rejected under §103(a) as unpatentable over Calma in view of Bender and further in view of Hadwin. The identical rejection of the prior action is copied, without in any way addressing applicant's arguments, which are asserted again. First, the distance between the component and the tip in Hadwin is longer than the pitch. Moreover, the Hadwin device has essentially only one probe having a component, so that the "plurality" limitation is not disclosed, and thus the distance from a ground plane contact lacking a component is not properly a "pitch".

Claims 24, 25, 28, and 29 were rejected under §103(a) as unpatentable over Hadwin in view of Bender. The rejection is traversed for the reasons discussed above with respect to claim 1, in that the asserted motivation is inadequate. In addition, the rejection of claim 24 is traversed for the additional reasons discussed above with respect to claims 5 and 15, in that the Bender and Hadwin teaching is at most arguably to position a component rearward of the entire tip, and not between front and rear portions.

Claims 28 and 29 should be allowable for the reasons discussed above with respect to claims 9, 10, and 18.

Claim 26 was rejected under §103(a) as unpatentable over Hadwin and Bender, and further in view of Calma. Even if the asserted flanges were in fact flanges, they are remote from the component 8, which is connected only in the broadest sense of a remote temporary electrical contact, and not an attachment. The claims has been amended to clarify this intended scope, in that the component is between the flanges. Moreover, the office action fails to articulate any motivation to modify Hadwin or Bender to provide flanges.

Claims 11, 12, 14, and 17 were rejected under §102(b) as unpatentable over Calma. The rejections are repeated verbatim from the prior action, without in any way addressing applicant's extensive arguments, as required by the MPEP. The rejection is in error when it asserts that Calma discloses "an electrical component 8 proximate to the tip and serially intervening between the tip and an opposed end of the pin." In fact, the asserted component 8 of Calma is beyond the tip 18 of Calma's pin 19 and that pin's end (31) opposite the tip, and there is no component

between the ends. The cited Calma component does not serially intervene. For this reason, claim 11 should be allowable.

Claims 12-20 depend from claim 11 and should be allowable for the above reasons and because of the features set forth therein.

Claim 12 should be allowable for the additional reason that the pins of Calma do not extend beyond the periphery, as asserted in the action. The body 4 asserted as the board appears to have a periphery (not shown) that extends well beyond the ragged right and left edges shown in Fig. 2 of Calma. And Calma's pins do not extend laterally toward or even near the periphery, let alone beyond it. The pins extend perpendicularly to the plane of the body, so that no amount of extension will project them beyond any possible body periphery. Applicant is using the language "extends beyond the periphery" in the conventional sense that an element does not extend beyond the periphery of a planar surface unless it extends laterally beyond the edge of the surface. Similarly, a tree does not extend beyond the periphery of a property simply by growing upward, but only if a limb extends laterally to overhang beyond the property line.

Claim 21-23 were rejected under §102(b) as unpatentable over Hadwin. Claim 21 has been amended to clarify that the pin is electrically connected to the sleeve, in contrast to the grounded metal receptacle 44 of Hadwin. Accordingly, and for the above reasons discussing movable pins having electrical components, claim 21 should be allowable.

Claims 22-29 depend from claim 21 and should be allowable for the above reasons and because of the features set forth therein.

Claim 26 should be allowable for the reasons discussed above with respect to claim 7.

The application should now be in condition for allowance. Reconsideration of the application is respectfully requested.

Respectfully submitted,
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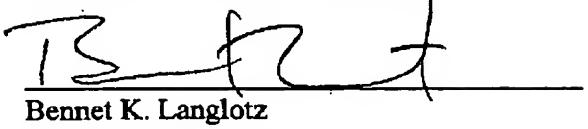

Bennet K. Langlotz
Attorney for Applicant
Registration No. 35,928

LANGLOTZ PATENT WORKS
PO Box 759
Genoa, NV 89411
Telephone 877 230 5950
Facsimile 877 230 5950
Email patent@langlotz.com

Customer Number 25917